For US.
09/049,865

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  File 155:MEDLINE(R)  1966-1999/Jul W4
         (c) format only 1999 Dialog Corporation
*File 155: reloaded, note accession numbers changed.
  File 434:SciSearch(R) Cited Ref Sci  1974-1989/Dec
         (c) 1998 Inst for Sci Info
  File  55:Biosis Preiviews(R)  1993-1999/May W4
         (c) 1999 BIOSIS
*File  55: File is reloaded. Accession number changed.

      Set  Items  Description
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? s microcapsule or semipermeable(w)membrane

            637  MICROCAPSULE
           1161  SEMIPERMEABLE
         680932  MEMBRANE
            470  SEMIPERMEABLE(W)MEMBRANE
     S1    1103  MICROCAPSULE OR SEMIPERMEABLE(W)MEMBRANE
? s immunoglobulin or lymphocyte

         133225  IMMUNOGLOBULIN
         206924  LYMPHOCYTE
     S2  326112  IMMUNOGLOBULIN OR LYMPHOCYTE
? s s1 and s2

           1103  S1
         326112  S2
     S3      41  S1 AND S2
? rd

...completed examining records
     S4      33  RD (unique items)
? s s4 and py<=1998

Processing
             33  S4
       22730149  PY<=1998
     S5      32  S4 AND PY<=1998
? t s5/3,k,ab/1-32

 5/3,K,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1999 Dialog Corporation. All rts. reserv.

09219203   97461442
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Human endothelial cell costimulation of T cell IFN-gamma production.
Briscoe DM; Henault LE; Geehan C; Alexander SI; Lichtman AH
Department of Pathology, Brigham and Women's Hospital, Boston, MA 02115, USA.
J Immunol (UNITED STATES) Oct 1 **1997**, 159 (7) p3247-56, ISSN 0022-1767 Journal Code: IFB
Contract/Grant No.: P01-HL36028, HL, NHLBI; K08-HL03518, HL, NHLBI
Languages: ENGLISH
Document type: JOURNAL ARTICLE

In this report, we show that human endothelial cells (EC) provide costimulatory signals to mitogen-activated CD4+ T cells to augment IFN-gamma production. We also show that EC can enhance responsiveness of the T cells to IL-12. While IL-12 has no effect on IFN-gamma production by cultured CD4+ T cells in the absence of EC, addition of IL-12 to T cell-EC cocultures augments IFN-gamma production by as much as fivefold. Separation of T cells from EC by a **semipermeable membrane** inhibits the effect of EC and IL-12 on IFN-gamma production. Anti-LFA-3 Abs, in the absence or presence of IL-12, inhibit EC costimulation of IFN-gamma production by up to 50%, while Abs to intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion molecule-1 (VCAM-1), LFA-1, and very late antigen-4 (VLA-4) have relatively little effect. Pretreatment of T cells with conditioned medium from T cell-EC cocultures, or with IL-2 or IL-1 alpha similarly primes CD4+ T cells for the costimulatory effect of IL-12 on IFN-gamma production. EC costimulation of IFN-gamma production is inhibited by cyclosporine. However, in the presence of IL-12 there is a marked resistance to this inhibitory effect, suggesting that the IL-12-induced costimulatory pathway is distinct from the costimulatory pathway activated by endothelium alone. Our data are consistent with the hypothesis that, as a consequence of interactions with endothelium, T cells that migrate into an inflammatory site are primed to have enhanced responses to Ag and cytokine(s), such as IL-12, that influence T cell-cytokine production.

Oct 1 **1997**,
...gamma production by as much as fivefold. Separation of T cells from EC by a **semipermeable membrane** inhibits the effect of EC and IL-12 on IFN-gamma production. Anti-LFA-3...
...; CY; Endothelium, Vascular--Physiology--PH; Interferon Type II--Drug Effects--DE; Interleukin-12--Physiology--PH; **Lymphocyte** Transformation--Drug Effects--DE

5/3,K,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08944872 97024590
A rapid qualitative method to assess in vitro immunobarrier competence of pancreatic islets containing alginate/polyaminoacidic microcapsules.
Calafiore R; Basta G; Sarchielli P; Luca G; Tortoioli C; Brunetti P
Department of Internal Medicine and Endocrine and Metabolic Sciences (DIMISEM), University of Perugia, Italy.
Acta Diabetol (GERMANY) Jul **1996**, 33 (2) p150-3, ISSN 0940-5429 Journal Code: A80
Languages: ENGLISH
Document type: JOURNAL ARTICLE

A quick method for the qualitative evaluation of immunoisolatory properties associated with islet-containing alginate/poly-L-ornithine (AG/PLO) microcapsules is described. In particular, we examined a new AG/PLO coherent **microcapsule** (CM) prototype that was recently developed in our laboratory, although the procedure could be applicable to other capsule types as well. We observed no binding of immunoglobulins (Ig) contained in islet cell antibody (ICA)-positive human sera (> 60 Juvenile Diabetes Foundation units, JDT U) to pig islets, enveloped within AG/PLO CM, under indirect immunofluorescence examination. Also, CM were shown to

inhibit human **lymphocyte** proliferative capacity fully, as assessed by the 3H-thymidine incorporation rate, in in vitro mixed xenogeneic pig islet/human **lymphocyte** co-cultures. These results provided us with a preliminary method to attempt standardization of basic physical/chemical properties which should be associated with an immunoisolatory membrane for islet allo/xenograft immunoprotection.

Jul **1996**,

... ornithine (AG/PLO) microcapsules is described. In particular, we examined a new AG/PLO coherent **microcapsule** (CM) prototype that was recently developed in our laboratory, although the procedure could be applicable...

... within AG/PLO CM, under indirect immunofluorescence examination. Also, CM were shown to inhibit human **lymphocyte** proliferative capacity fully, as assessed by the 3H-thymidine incorporation rate, in in vitro mixed xenogeneic pig islet/human **lymphocyte** co-cultures. These results provided us with a preliminary method to attempt standardization of basic...

5/3,K,AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10/1/99

08944696 97081355

Evaluation of asymmetric poly(vinyl alcohol) membranes for use in artificial islets.

Young TH; Yao NK; Chang RF; Chen LW

Center for Biomedical Engineering, College of Medicine, National Taiwan University, Taipei, Taiwan, R.O.C.

Biomaterials (ENGLAND) Nov **1996**, 17 (22) p2139-45, ISSN 0142-9612 Journal Code: A4P

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Islets of Langerhans surrounded by a **semipermeable membrane** to prevent the host immunosystem is a potential way to treat type I diabetes mellitus. In this study, a series of poly (vinyl alcohol) membranes were formed by adding polyethylene glycols to create pores in the skin layer. The permeability study showed the skin layer structure had an influence on the diffusion of low molecular weight glucose, vitamin B12 and insulin. The mass transfer coefficient was improved from 1.04 x 10(-4) to 2.16 x 10(-4) cm/ sec for glucose, from 2.84 x 10(-5) to 8.36 x 10(-5) cm/sec for vitamin B12 and from 1.45 x 10(-6) to 4.15 x 10(-6) cm/sec for insulin, whereas the passage of **immunoglobulin** G was completely prevented, indicating that these membranes could be effective in protecting islets from immunorejection. Thus such a membrane is an alternative potential material for artificial islets. In addition, we examined the insulin secretory response of islets separated by a poly(vinyl alcohol) membrane. We found that the insulin-secretion rate is relatively rapid compared to the permeation rate of insulin; thus, the process of the artificial islets is insulin-diffusion-controlled.

Nov **1996**,

Islets of Langerhans surrounded by a **semipermeable membrane** to prevent the host immunosystem is a potential way to treat type I diabetes mellitus...

...6) to 4.15 x 10(-6) cm/sec for insulin, whereas the passage of **immunoglobulin** G was completely prevented, indicating that these membranes could be effective in protecting islets from...

5/3,K,AB/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

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08859758 97076239
Dual function of a human immunodeficiency virus (HIV)-specific cytotoxic T-**lymphocyte** clone: inhibition of HIV replication by noncytolytic mechanisms and lysis of HIV-infected CD4+ cells.
Buseyne F; Fevrier M; Garcia S; Gougeon ML; Riviere Y
Unite de Virologie et Immunologie Cellulaire, URA CNRS 1157, Institut Pasteur, Paris, France.
Virology (UNITED STATES) Nov 1 **1996**, 225 (1) p248-53, ISSN 0042-6822 Journal Code: XEA
Languages: ENGLISH
Document type: JOURNAL ARTICLE
CD8+ T cells may play a beneficial role in human immunodeficiency virus (HIV)-infected patients by two mechanisms. HIV-specific cytotoxic activity and secretion of a soluble mediator(s) that inhibits HIV replication in vitro. Here we characterized both activities mediated by an HIV p24gag-specific cytotoxic T **lymphocyte** (CTL) CD8+ clone derived from an HIV-infected patient. When the CTL clone was mixed with HIV-infected autologous CD4+ T cells, viral replication was suppressed. This viral inhibition was observed in heterologous CD4+ T cells and when CD8+ and CD4+ populations were separated by a **semipermeable membrane** , demonstrating the involvement of a diffusible factor(s). The lysis of autologous HIV-infected T cells was also detected. However, HIV suppression was more efficient when CD4+ and CD8+ T cells shared major histocompatibility complex alleles and were in direct contact. Thus, one and the same CD8+ T cell population can mediate both lysis of HIV-infected targets and nonlytic suppression of HIV replication. These results underline the multiple roles of CD8+ T lymphocytes in the suppression of HIV-infected cells.

Dual function of a human immunodeficiency virus (HIV)-specific cytotoxic T-**lymphocyte** clone: inhibition of HIV replication by noncytolytic mechanisms and lysis of HIV-infected CD4+ cells.
Nov 1 **1996**,
... in vitro. Here we characterized both activities mediated by an HIV p24gag-specific cytotoxic T **lymphocyte** (CTL) CD8+ clone derived from an HIV-infected patient. When the CTL clone was mixed...

... in heterologous CD4+ T cells and when CD8+ and CD4+ populations were separated by a **semipermeable membrane** , demonstrating the involvement of a diffusible factor(s). The lysis of autologous HIV-infected T...

5/3,K,AB/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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08823166 96423015
Allostimulated lymphocytes inhibit replication of HIV type 1.
Bruhl P; Kerschbaum A; Zimmermann K; Eibl MM; Mannhalter JW
Department of Immunological Research, Immuno AG, Vienna, Austria.
AIDS Res Hum Retroviruses (UNITED STATES) Jan 1 **1996**, 12 (1) p31-7, ISSN 0889-2229 Journal Code: ART
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Previous reports demonstrated that alloantigen- or xenoantigen-specific antibodies displayed neutralizing activity toward human or simian immunodeficiency viruses. In the present article we have addressed the question of alloantigen-induced cell-mediated anti-HIV activity. We show that allostimulation resulted in a **lymphocyte** population (largely of the CD8-positive phenotype) with the capacity to inhibit HIV-1 replication in PHA blasts of homologous and, unexpectedly, also autologous origin. The allostimulated effector cells exerted their activity via a noncytolytic

mechanism. Experiments in which direct cell-to-cell contact between allostimulated effectors and HIV-1-infected PHA blasts was prevented by a **semipermeable membrane** indicated that soluble mediators were involved in inhibition of HIV-1 replication. As such allostimulated effectors not only would have the capacity to prevent viral replication in allogeneic HIV-1-infected cells (known to play an important role in HIV-1 transmission in vivo), but also might inhibit HIV-1 growth in autologous lymphocytes, the concept of an AIDS vaccine containing both HIV-1 antigens and alloantigens warrants further consideration.

Jan 1 **1996**,

... of alloantigen-induced cell-mediated anti-HIV activity. We show that allostimulation resulted in a **lymphocyte** population (largely of the CD8-positive phenotype) with the capacity to inhibit HIV-1 replication...

... cell contact between allostimulated effectors and HIV-1-infected PHA blasts was prevented by a **semipermeable membrane** indicated that soluble mediators were involved in inhibition of HIV-1 replication. As such allostimulated...

5/3,K,AB/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08722756 96275798

Selective induction of mucosal immune responses to 2-acetylaminofluorene.

Silbart LK; McAleer F; Rasmussen MV; Goslinoski L; Keren DF; Finley A; Van Kruiningen HJ; Winchell JM

University of Connecticut, Center for Environmental Health, Storrs 06269, USA.

Anticancer Res (GREECE) Mar-Apr **1996**, 16 (2) p651-60, ISSN 0250-7005 Journal Code: 59L

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Mucosal vaccination with chemical carcinogens coupled to enterotoxins such as cholera toxin (CT) can elicit carcinogen-specific **immunoglobulin** secretion into the intestinal lumen. The present study examines the ability of several related bacterial enterotoxins and their subunits to act as adjuvants or carrier proteins in stimulating an intestinal secretory IgA (S-IgA) response to 2-acetylaminofluorene (AAF). Using Thiry-Vella loops in rabbits, CT, cholera toxin B subunit (CTB) and the recombinant B subunit of the heat labile enterotoxin from E. coli (rLTB) were all found to be effective carrier proteins and adjuvants for eliciting S-IgA anti-AAF. However, marked differences in the ratio of mucosal S-IgA to serum IgG production were observed. CT elicited the highest luminal S-IgA anti-AAF titers as well as the highest ratio of intestinal S-IgA/serum IgG when used as an adjuvant. Conversely, rLTB elicited a high serum IgG anti-AAF titer but only a modest intestinal S-IgA response. Dialysis studies using monoclonal IgA versus IgG anti-AAF on opposing sides of a **semipermeable membrane** demonstrated the potential importance of the intestinal S-IgA/serum IgG ratio. A high "intestinal" IgA/"serum" IgG ratio abolished carcinogen transfer to the "serum" side of the membrane, while a low ratio enhanced transfer. Thus, to generate an active mucosal immune response capable of blocking carcinogen absorption, the carrier protein or adjuvant should be selected to optimize the intestinal S-IgA/serum IgG ratio.

Mar-Apr **1996**,

... with chemical carcinogens coupled to enterotoxins such as cholera toxin (CT) can elicit carcinogen-specific **immunoglobulin** secretion into the intestinal lumen. The present study examines the ability of several related bacterial...

... response. Dialysis studies using monoclonal IgA versus IgG anti-AAF on

opposing sides of a **semipermeable membrane** demonstrated the potential importance of the intestinal S-IgA/serum IgG ratio. A high "intestinal...

5/3,K,AB/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08393643 95378695
T and B cell collaboration is essential for the autoantibody response to DNA topoisomerase I in systemic sclerosis.
Kuwana M; Medsger TA Jr; Wright TM
Department of Medicine, University of Pittsburgh School of Medicine, PA 15213, USA.
J Immunol (UNITED STATES) Sep 1 **1995**, 155 (5) p2703-14, ISSN 0022-1767 Journal Code: IFB
Contract/Grant No.: AR-21393, AR, NIAMS
Languages: ENGLISH
Document type: JOURNAL ARTICLE
To elucidate the mechanisms controlling anti-DNA topoisomerase I (topo I) antibody production in patients with systemic sclerosis (SSc), in particular the role of interactions between topo I-specific Th cells and B cells, we established an in vitro system for the analysis of anti-topo I antibody production. In vitro anti-topo I antibody synthesis in PBMC cultures was induced by recombinant topo I and PWM, and was measured by a topo I-specific ELISA. Anti-topo I antibody was detected in PBMC culture supernatants from 11 (61%) of 18 anti-topo I-positive SSc patients. In contrast, anti-topo I antibody was not detected in the PBMC culture supernatants from 4 anti-topo I-negative SSc patients or 10 healthy donors. Characterization of in vitro anti-topo I antibody production showed that 1) the anti-topo I antibody isotype produced was IgG; 2) the anti-topo I antibody levels in culture supernatants correlated with those in patients' sera; 3) CD4+ T cells were necessary for antibody synthesis; and 4) antibody synthesis was restricted by HLA-DR, but not by HLA-DQ or DP. In addition, separation of cultured T and B cells by a **semipermeable membrane** or culture with anti-CD40 ligand mAb blocked in vitro anti-topo I antibody production. These results indicate that a contact-mediated and HLA-DR-restricted collaboration between topo I-specific T and B cells is essential for in vitro anti-topo I antibody production in a subset of SSc patients.

Sep 1 **1995**,
...HLA-DQ or DP. In addition, separation of cultured T and B cells by a **semipermeable membrane** or culture with anti-CD40 ligand mAb blocked in vitro anti-topo I antibody production...
; Adult; Aged; Autoantibodies--Biosynthesis--BI; Cells, Cultured; Epitope Mapping; **Lymphocyte** Cooperation--Immunology--IM; Middle Age

5/3,K,AB/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08199739 95322007
Cell-to-cell contact not soluble factors mediate suppression of **lymphocyte** proliferation by bovine parainfluenza virus type 3.
Basaraba RJ; Laegreid WW; Brown PR; Silflow RM; Brown RA; Leid RW
Department of Veterinary Diagnostic Investigation, College of Veterinary Medicine, Kansas State University, Manhattan 66506-5660, USA.
Viral Immunol (UNITED STATES) **1994**, 7 (3) p121-32, ISSN 0882-8245 Journal Code: AD0
Languages: ENGLISH
Document type: JOURNAL ARTICLE
We have previously characterized the ability of parainfluenza virus type

3-infected (PIV-3) and noninfected bovine alveolar macrophages (BAM) to support **lymphocyte** proliferation. While uninfected macrophages support proliferation of lymphocytes stimulated with concanavalin A (Con A), ovalbumin, and interleukin 2 (IL-2), **lymphocyte** [3H]thymidine incorporation was suppressed in the presence of PIV-3-infected BAM. Since viral infection of macrophages has been shown to alter arachidonic acid metabolism and cytokine secretion, we have determined if arachidonate metabolism or the lack of IL-1 and IL-2 mediated the suppression of **lymphocyte** proliferation by PIV-3. Inhibition of arachidonic acid metabolism failed to reverse the suppressive effect of viral infection as did supplementation of cultures with bovine recombinant IL-1 beta, IL-2, or **lymphocyte** -conditioned medium. Further, lymphocytes proliferated normally when physically separated from virus infected BAM by a **semipermeable membrane** . Stimulation of lymphocytes in contact with infected BAM resulted in marked suppression of **lymphocyte** [3H]thymidine incorporation. Interactions between stimulated lymphocytes and PIV-3-infected BAM resulted in PIV-3 infection of lymphocytes. Virus infection of lymphocytes was confirmed ultrastructurally by the presence of characteristic parainfluenza virus inclusions and virus budding from **lymphocyte** plasma membranes. It was concluded that suppression of **lymphocyte** proliferation by PIV-3 is mediated in part by infection of stimulated lymphocytes during cell-to-cell contact with BAM.

Cell-to-cell contact not soluble factors mediate suppression of **lymphocyte** proliferation by bovine parainfluenza virus type 3.
1994,
... parainfluenza virus type 3-infected (PIV-3) and noninfected bovine alveolar macrophages (BAM) to support **lymphocyte** proliferation. While uninfected macrophages support proliferation of lymphocytes stimulated with concanavalin A (Con A), ovalbumin, and interleukin 2 (IL-2), **lymphocyte** [3H]thymidine incorporation was suppressed in the presence of PIV-3-infected BAM. Since viral...
... arachidonate metabolism or the lack of IL-1 and IL-2 mediated the suppression of **lymphocyte** proliferation by PIV-3. Inhibition of arachidonic acid metabolism failed to reverse the suppressive effect...

... infection as did supplementation of cultures with bovine recombinant IL-1 beta, IL-2, or **lymphocyte** -conditioned medium. Further, lymphocytes proliferated normally when physically separated from virus infected BAM by a **semipermeable membrane** . Stimulation of lymphocytes in contact with infected BAM resulted in marked suppression of **lymphocyte** [3H]thymidine incorporation. Interactions between stimulated lymphocytes and PIV-3-infected BAM resulted in PIV...

... was confirmed ultrastructurally by the presence of characteristic parainfluenza virus inclusions and virus budding from **lymphocyte** plasma membranes. It was concluded that suppression of **lymphocyte** proliferation by PIV-3 is mediated in part by infection of stimulated lymphocytes during cell...
Descriptors: Cell Communication; *Immune Tolerance; ***Lymphocyte** Transformation; *Macrophages--Virology--VI; *Parainfluenza Virus 3, Human --Immunology--IM

5/3,K,AB/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08189339 94306755
Inhibition of HIV replication by CD8+ T cells correlates with CD4 counts and clinical stage of disease.
Gomez AM; Smaill FM; Rosenthal KL
Department of Pathology, McMaster University Health Sciences Center, Hamilton, Ontario, Canada.
Clin Exp Immunol (ENGLAND) Jul **1994**, 97 (1) p68-75, ISSN

0009-9104 Journal Code: DD7
Languages: ENGLISH
Document type: JOURNAL ARTICLE
We sought to evaluate the relationship of CD8+ T cell-mediated inhibition of autologous HIV replication in vitro to disease stage in HIV+ individuals. Depletion of CD8+ T cells from peripheral blood lymphocytes of 16 HIV+ subjects increased the percentage of virus-producing cultures from 56% to 81%. CD4+ T cells were purified from 52 HIV+ individuals and cultured alone or in the presence of autologous CD8+ T cells. In 13 (25%) subjects HIV replication was only detected in the absence of CD8+ T cells (inhibition positive); in 26 (50%) viral replication occurred both in the absence and presence of CD8+ cells (inhibition negative). In the remaining 13 (25%) subjects, CD8+ T cell-mediated inhibitory activity could not be evaluated because stimulation of their purified CD4+ T cells did not result in p24 production. In some virus culture-negative individuals, the inability to demonstrate HIV replication was due to the presence of low numbers of CD8+ T cells that co-purified with CD4+ T cells. Detection of inhibitory CD8+ T cells was associated with significantly higher CD4 counts and better clinical status compared with inhibition-negative subjects. These results demonstrate that CD8+ T cell-mediated inhibition of HIV replication correlates with disease stage, and thus may play a role in preventing disease progression. CD8+ T cells did not inhibit autologous HIV replication across a **semipermeable membrane** . Further, the ability of CD8+ T cells to prevent HIV replication did not correlate with lysis of autologous CD4+ T cells. Thus, CD8+ T cells inhibited autologous HIV replication in vitro through a contact-mediated non-lytic mechanism.

Jul **1994**,
... in preventing disease progression. CD8+ T cells did not inhibit autologous HIV replication across a **semipermeable membrane**. Further, the ability of CD8+ T cells to prevent HIV replication did not correlate with...
...Descriptors: Immunology--IM; *HIV Infections--Microbiology--MI; *HIV-1--Immunology--IM; *HIV-1--Physiology--PH; *T-**Lymphocyte** Subsets--Immunology--IM...; Lymphocytes--Immunology--IM; HIV Core Protein p24--Biosynthesis--BI; HIV Infections--Blood--BL; Leukocyte Count; **Lymphocyte** Transformation; RNA-Directed DNA Polymerase--Metabolism --ME; Virus Replication

5/3,K,AB/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07799005 93329112
Monocyte-regulated IFN-gamma production in human T cells involves CD2 signaling.
Wingren AG; Dahlenborg K; Bjorklund M; Hedlund G; Kalland T; Sjogren HO; Ljungdahl A; Olsson T; Ekre HP; Sansom D; et al
Wallenberg Laboratory, Department of Tumor Immunology, University of Lund, Sweden.
J Immunol (UNITED STATES) Aug 1 **1993**, 151 (3) p1328-36, ISSN 0022-1767 Journal Code: IFB
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Cooperation between monocytes and T lymphocytes is essential for several aspects of immunologic activation. We have utilized PHA and IL-2-activated human T cells to characterize the role of monocytes in the regulation of T cell-derived IFN-gamma production. The limited IFN-gamma production by isolated T cells in this culture system was increased more than 10-fold when monocytes were added. No influence of monocytes was observed on TNF production or T cell proliferation. Maximal level of IFN-gamma in the cell culture supernatants was obtained when monocytes were added within 12 h after activation of the T cells with IL-2 and PHA. Addition of monocytes 48 h after activation resulted in marginal production of IFN-gamma, suggesting

that T cells are sensitive to the monocyte-related signal during a short time period after activation. Cell-to-cell contact between the T cells and accessory cells was found to be necessary for enhanced IFN-gamma production because separation of the cells with a **semipermeable membrane** abolished the effect. mAb blocking experiments suggested the involvement of the CD2/LFA-3 but not the LFA-1/ICAM-1 pathway in monocyte regulation of T cell synthesis of IFN-gamma. Chinese hamster ovary (CHO) cells transfected with LFA-3 (CHO-LFA-3) and HLA-DR4/LFA-3 (CHO-DR4/LFA-3) strongly enhanced T cell IFN-gamma production, whereas untransfected CHO cells, CHO cells transfected with ICAM-1 (CHO-DR4/ICAM-1), and HLA-DR4 (CHO-DR4) did not support IFN-gamma production. PCR analysis and in situ hybridization demonstrated enhanced IFN-gamma mRNA levels in T cells stimulated in the presence of CHO-DR4/LFA-3 compared with untransfected CHO cells, indicating that the CD2/LFA-3 pathway regulates IFN-gamma production at the mRNA level. CHO-LFA-3 and CHO-DR4/ICAM-1 cells mediated strong adhesion to T cells, whereas untransfected CHO cells and CHO-DR4 cells failed to mediate adhesion. This suggests that the ability of CHO-LFA-3 but not CHO-DR4/ICAM-1 cells to induce IFN-gamma production was attributed to signal transduction rather than cell adhesion only.

Aug 1 **1993**,
... to be necessary for enhanced IFN-gamma production because separation of the cells with a **semipermeable membrane** abolished the effect. mAb blocking experiments suggested the involvement of the CD2/LFA-3 but...
Descriptors: Antigen-Presenting Cells--Immunology--IM; *Antigens, Differentiation, T-**Lymphocyte**--Physiology--PH; *Interferon Type II --Biosynthesis--BI; *Monocytes--Physiology--PH; *Receptors, Immunologic --Physiology--PH; *T...
...; Cell Adhesion Molecules--Physiology--PH; CHO Cells; Gene Expression; Hamsters; Interferon Type II--Genetics--GE; **Lymphocyte** Transformation ; Membrane Glycoproteins--Physiology--PH; RNA, Messenger--Genetics--GE; Signal Transduction; Time Factors; Transfection
Chemical Name: Antigens, CD; (Antigens, CD2; (Antigens, CD58; (Antigens, Differentiation, T-**Lymphocyte**; (Cell Adhesion Molecules; (Membrane Glycoproteins; (Receptors, Immunologic; (RNA, Messenger; (Intercellular Adhesion Molecule-1; (Interferon Type...

5/3,K,AB/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07784276 94217106
Alterations in thymic and bone marrow **lymphocyte** subpopulations in GnRH agonist treated prepubertal female mice.
Rao LV; Cleveland RP; Ataya KM
Department of Obstetrics/Gynaecology, MetroHealth Medical Center, Case Western Reserve University, Cleveland, OH.
J Reprod Immunol (IRELAND) Nov **1993**, 25 (2) p167-84, ISSN 0165-0378 Journal Code: JWS
Contract/Grant No.: CA 49081, CA, NCI
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Complex endocrine relationships exist among the hypothalamus, pituitary, ovaries and thymus. There is also considerable evidence showing gonadotropin releasing hormone (GnRH) involvement in modulating immune system functions. The present study investigated the sequential changes in functional **lymphocyte** subsets in primary lymphoid tissues of prepubertal female mice in vivo following GnRH agonist treatment in slow release **microcapsule** formulation. A direct two color immunofluorescence staining followed by flow cytometry was employed. Single i.m injection of agonist significantly decreased both absolute and relative thymic weights and absolute thymocyte counts. No differences, however, were observed in the percentage of thymocytes expressing Thy 1.2, CD4 and CD8.

Absolute levels of thymic T cells, CD8 positive cells, immature cells expressing both CD4 and CD8, and immature subsets differentiating toward CD4 were significantly reduced two weeks after agonist treatment. The percentage of bone marrow B cells was also significantly decreased at the second and third weeks following agonist administration. Functional studies to determine in vivo cell-mediated immune function also indicated a significant suppression following agonist administration. These data, together with our earlier observations on secondary lymphoid tissues, suggest a general suppression of **lymphocyte** maturation at an early stem cell stage of development in prepubertal female mice in vivo.

Alterations in thymic and bone marrow **lymphocyte** subpopulations in GnRH agonist treated prepubertal female mice.
Nov **1993**,
... involvement in modulating immune system functions. The present study investigated the sequential changes in functional **lymphocyte** subsets in primary lymphoid tissues of prepubertal female mice in vivo following GnRH agonist treatment in slow release **microcapsule** formulation. A direct two color immunofluorescence staining followed by flow cytometry was employed. Single i...
... data, together with our earlier observations on secondary lymphoid tissues, suggest a general suppression of **lymphocyte** maturation at an early stem cell stage of development in prepubertal female mice in vivo.
Descriptors: Bone Marrow--Drug Effects--DE; *Leuprolide--Pharmacology--PD ; ***Lymphocyte** Subsets--Drug Effects--DE; *Thymus Gland--Drug Effects --DE...; CD4-Positive T-Lymphocytes--Immunology--IM; Dermatitis, Contact; Immunity, Cellular--Drug Effects--DE; Leukocyte Count; **Lymphocyte** Subsets--Immunology--IM; Mice; Mice, Inbred BALB C; Organ Weight--Drug Effects--DE; Sex Maturation...

5/3,K,AB/12 (Item 12 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07612874 93366452
Comparison of gamma interferon, tumor necrosis factor, and direct cell contact in activation of antimycobacterial defense in murine macrophages.
Sypek JP; Jacobson S; Vorys A; Wyler DJ
Division of Geographic Medicine and Infectious Diseases, New England Medical Center, Boston, Massachusetts 02111.
Infect Immun (UNITED STATES) Sep **1993**, 61 (9) p3901-6, ISSN 0019-9567 Journal Code: GO7
Contract/Grant No.: R01-AI17151, AI, NIAID; R01-AI17651, AI, NIAID; S07-2R-05598
Languages: ENGLISH
Document type: JOURNAL ARTICLE
We compared the abilities of gamma interferon (IFN-gamma), tumor necrosis factor alpha (TNF-alpha), and sensitized murine lymph node lymphocytes to activate syngeneic murine peritoneal macrophages to inhibit the growth of intracellular Mycobacterium bovis BCG in vitro. IFN-gamma could activate antimycobacterial defense only when added to macrophage cultures prior to their infection with BCG. TNF-alpha was without any effect. In contrast, BCG-sensitized lymphocytes could induce antimycobacterial defenses when added after macrophages had been infected with BCG. The cell-mediated effect required direct contact between effector lymphocytes and the targets (BCG-infected macrophages), as revealed in studies in which these cell populations were separated by a **semipermeable membrane** . Cyclosporin A, which inhibits the production of relevant macrophage-activating lymphokines, did not abrogate the ability of sensitized lymphocytes to activate antimycobacterial effects in infected macrophages. Furthermore, only BCG-sensitized lymphocytes, and not Listeria-sensitized lymphocytes, could activate the antimycobacterial effects. These lymphocytes were not cytotoxic to the infected macrophages. The presence of anti-TNF-alpha antibody in cocultures reduced the

antimicrobial effects. We propose that the activation of antimycobacterial defense in macrophages can occur by direct physical contact with sensitized lymphocytes. This process may be due to **lymphocyte** membrane-associated TNF-alpha, as we previously demonstrated in our studies of antileishmanial defense.

Sep **1993**,
... infected macrophages), as revealed in studies in which these cell populations were separated by a **semipermeable membrane** . Cyclosporin A, which inhibits the production of relevant macrophage-activating lymphokines, did not abrogate the...

... can occur by direct physical contact with sensitized lymphocytes. This process may be due to **lymphocyte** membrane-associated TNF-alpha, as we previously demonstrated in our studies of antileishmanial defense.

5/3,K,AB/13 (Item 13 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07449485 93091334
Inflammatory reaction induced by agarose implants reduced by adding adrenal cells to the polymer.
Cadic-Amadeuf CM; Vitiello S; Baquey CV; Dupuy BJ
Institut de la Sante et de la Recherche Medicale, Bordeaux, France.
ASAIO J (UNITED STATES) Jul-Sep **1992**, 38 (3) pM386-9, ISSN 1058-2916 Journal Code: BBH
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Microencapsulation of adrenal cells is proposed for reducing the non-specific inflammatory reaction observed around polymer implants. This hypothesis was tested by comparing both host cellular reaction and the surrounding graft cell populations that appeared when either agarose embedded cells or empty agarose beads were implanted. The authors' results showed that the fibrotic material that surrounded the implanted empty agarose microbeads was not as severe when adrenal cells were present. Similarly, the T **lymphocyte** population surrounding the graft was considerably reduced, along with the percentage of CD4 and CD8 positive cell subpopulations. The activation macrophage marker IaD disappeared. The authors' results support the hypothesis that embedded adrenal cells may be a suitable solution for reducing early inflammatory events due to **microcapsule** implantation.

Jul-Sep **1992**,
... empty agarose microbeads was not as severe when adrenal cells were present. Similarly, the T **lymphocyte** population surrounding the graft was considerably reduced, along with the percentage of CD4 and CD8...

... embedded adrenal cells may be a suitable solution for reducing early inflammatory events due to **microcapsule** implantation.

5/3,K,AB/14 (Item 14 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07328380 92349007
Direct interaction between an antigen-specific B-cell clone and an MHC class II-reactive helper T cell clone.
Hamano T; Asano Y; Iwasaki T; Yamasaki T; Hase K; Kakishita E
Second Department of Internal Medicine, Hyogo College of Medicine, Japan.
J Leukoc Biol (UNITED STATES) Jul **1992**, 52 (1) p89-96, ISSN 0741-5400 Journal Code: IWY
Languages: ENGLISH

Document type: JOURNAL ARTICLE
TP67.14 established by somatic hybridization is a 2,4,6-trinitrobenzenesulfonic acid (trinitrophenyl, TNP)-specific B cell clone with a receptor molecule for TNP on the cell membrane, and MS202 is an interleukin-2 (IL-2)-dependent T helper (Th) cell clone reactive to auto-MHC class II antigens (IAk and IEk) as previously reported. In the present study it was shown that MS202 considerably induced the maturation of TP67.14 into anti-TNP plaque-forming cells (PFCs), and this response was markedly augmented by the addition of TNP-keyhole limpet hemocyanin (KLH). Recombinant cytokines and the culture supernatant of MS202 with TP67.14 did not affect the generation of anti-TNP antibodies by TP67.14. Also, neither anti-IL-4 nor anti-IL-5 monoclonal antibody (mAb) inhibited the maturation of TP67.14 mediated by MS202. The differentiative effect of MS202 on TP67.14 was completely lost when each cell was separately cultured using a **semipermeable membrane** . Monoclonal antibodies against LFA-1 beta molecules significantly blocked the development of anti-TNP PFCs induced by MS202, as well as anti-IAk and anti-IEk mAbs. Interestingly, the plasma membrane-enriched fraction (PM) derived from MS202 exhibited much more differentiative effects on TP67.14 treated with TNP-KLH than PM from other T cell lines and concanavalin A-induced T lymphoblasts. In addition, TNP-conjugated PM from MS202 by itself induced a great number of anti-TNP PFCs. The present findings indicate that MS202 is capable of inducing the maturation of TP67.14, which is considered to represent a population of B cells with antigen specificity in a late lineage of B cell maturation, through direct cell contact but not soluble factors. This suggests that B cells with antigen specificity, in the presence of antigen, can be induced to mature into antibody-secreting cells through direct contact with Th cells; in this process surface major histocompatibility complex class II and **lymphocyte** function-associated antigen 1 (LFA-1) molecules are directly involved and the cell membrane derived from Th cells provides a transductional signal for maturation of B cells with antigen specificity in the presence of antigen.

Jul **1992**,
... MS202 on TP67.14 was completely lost when each cell was separately cultured using a **semipermeable membrane**. Monoclonal antibodies against LFA-1 beta molecules significantly blocked the development of anti-TNP PFCs...

... direct contact with Th cells; in this process surface major histocompatibility complex class II and **lymphocyte** function-associated antigen 1 (LFA-1) molecules are directly involved and the cell membrane derived...
...; Cell Differentiation--Drug Effects--DE; Cell Membrane--Physiology --PH; Clone Cells; Cytokines--Pharmacology--PD; Epitopes; **Lymphocyte** Function-Associated Antigen-1--Physiology--PH; T-Lymphocytes, Helper-Inducer--Immunology--IM; Trinitrobenzenes--Immunology--IM
Chemical Name: Antigens, Surface; (Cytokines; (Epitopes; (Histocompatibility Antigens Class II; (**Lymphocyte** Function-Associated Antigen-1; (Trinitrobenzenes

5/3,K,AB/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07015390 92127606
Functional role of self IA molecules in polyclonal B cell activation using an autoreactive B cell clone derived from (NZB X NZW) F1 mice.
Iwasaki T; Hamano T; Hase K; Murata Y; Yamasaki T; Kakishita E
Second Department of Internal Medicine, Hyogo College of Medicine, Japan.
Cell Immunol (UNITED STATES) Feb **1992**, 139 (2) p386-98, ISSN 0008-8749 Journal Code: CQ9
Languages: ENGLISH
Document type: JOURNAL ARTICLE

The mechanism of polyclonal B cell activation in autoimmune diseases was investigated by using an autoreactive B cell clone established by somatic hybridization with B cells derived from NZB X NZW (B/W) F1 mice. Briefly, splenic B cells from B/W F1 mice were fused with M12.4.1, a mutant of a B cell line, in the presence of polyethylene glycol and DMSO. NW47.7, a subclone of a resulting hybridoma, expresses B cell surface antigens on the cell membrane, namely IAd, IgM, B220, the receptors for the C3 fragment of complement (C3R), and the Fc portion of IgG (Fc gamma R). It also possesses a receptor molecule for mouse red blood cells treated with bromelain (Br-MRBC) on its surface, by rosette-forming assay with Br-MRBC. In contrast, parental M12.4.1 does not express IAd and IgM on the cell membrane, and does not bind to Br-MRBC under the same conditions. Thus, it is likely that NW47.7 may be an autoreactive B cell clone specific for Br-MRBC. Interestingly, NW47.7 was induced to generate a significant number of IgM-secreting cells when treated with Br-MRBC and rIL-5. Furthermore, mAb against IAd molecules, but not IAk and KdDd, markedly inhibited the differentiative effect of polyclonal activators such as LPS and rIL-5. Also, when MHC identical irradiated B cells were added to the culture of NW47.7 as a stimulator, the induction of IgM-producing cells was greatly augmented, but this augmenting effect was lost by interfering with direct contact of NW47.7 cells with stimulator B cells using a **semipermeable membrane**, as well as by the addition of mAb against IAd molecules. In addition, irradiated NW47.7, but not M12.4.1, by itself could enhance the secretion of IgM by NW47.7 as a stimulator, but this enhancing effect markedly decreased in the presence of anti-IAd mAb. The present results suggest that surface IA molecules on B cells are involved during the differentiative response to polyclonal activators, and may directly provide a differentiative signal for maturation of B cells into IgM-secreting cells.

Feb **1992**,
... by interfering with direct contact of NW47.7 cells with stimulator B cells using a **semipermeable membrane**, as well as by the addition of mAb against IAd molecules. In addition, irradiated NW47...
...; Cells--Drug Effects--DE; Clone Cells--Immunology--IM; Hybrid Cells; Interleukin-5--Pharmacology--PD; Lipopolysaccharides; **Lymphocyte** Transformation--Drug Effects--DE; Mice; Mice, Inbred BALB C; Mice, Inbred NZB

5/3,K,AB/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06730340 91274259
Adsorption of negatively charged microcapsules to a poly(2-hydroxyethylmethacrylate)/polyamine graft co-polymer surface.
Muramatsu N; Yoshida Y; Katayama Y; Ohshima H; Kondo T
Faculty of Pharmaceutical Sciences, Science University of Tokyo, Japan.
J Biomater Sci Polym Ed (NETHERLANDS) **1991**, 2 (2) p139-46,
ISSN 0920-5063 Journal Code: AY7
Languages: ENGLISH
Document type: JOURNAL ARTICLE
The electrokinetic properties of artificial particles--microcapsules--were compared with those of the rat **lymphocyte** sub-populations, T and B cells, and similar results were obtained. The affinity of the microcapsules to the polyamine graft co-polymer, which was claimed to be capable of separating the cells efficiently, was measured and it revealed that not the magnitude of the surface negative charge and the kind of dissociable groups, but the balance of the anionic and cationic charges on the **microcapsule** surface played a key role in their adsorption to the co-polymer.

1991,
The electrokinetic properties of artificial particles--microcapsules--wer

e compared with those of the rat **lymphocyte** sub-populations, T and B cells, and similar results were obtained. The affinity of the...

... kind of dissociable groups, but the balance of the anionic and cationic charges on the **microcapsule** surface played a key role in their adsorption to the co-polymer.

5/3,K,AB/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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06656502 90217499
CD8+ T cells inhibit HIV replication in naturally infected CD4+ T cells. Evidence for a soluble inhibitor.
Brinchmann JE; Gaudernack G; Vartdal F
Institute of Transplantation Immunology, National Hospital, Oslo, Norway.
J Immunol (UNITED STATES) Apr 15 **1990**, 144 (8) p2961-6, ISSN 0022-1767 Journal Code: IFB
Languages: ENGLISH
Document type: JOURNAL ARTICLE
This study describes the inhibitory effect exerted by activated CD8+ T cells on the replication of HIV in naturally infected CD4+ T cells. Highly purified CD4+ T cells from asymptomatic HIV seropositive individuals were stimulated with anti-TCR mAb-coated beads in the presence of IL-2. HIV was subsequently reproducibly isolated in cell supernatants from all study participants (53 cultures from 42 individuals). Both autologous and allogeneic CD8+ T cells from asymptomatic HIV seropositive and healthy HIV seronegative individuals inhibited the replication of HIV in these cultures in a dose-dependent manner. CD8+ T cells from patients with AIDS showed reduced or no such inhibitory activity. The inhibitory effect was not dependent on direct cell-cell contact: an inhibitory effect was exerted by CD8+ T cells across a **semipermeable membrane**, and an inhibitory activity was also exerted by the cell-free supernatants from activated CD8+ T cells. These results suggest that activated CD8+ T cells secrete a soluble inhibitor of HIV replication.

Apr 15 **1990**,
... direct cell-cell contact: an inhibitory effect was exerted by CD8+ T cells across a **semipermeable membrane** , and an inhibitory activity was also exerted by the cell-free supernatants from activated CD8 ...
; Antibodies, Monoclonal; Antigens, CD--Analysis--AN; Antigens, Differentiation--Analysis--AN; Antigens, Differentiation, T-**Lymphocyte%% %--Analysis--AN; Cells, Cultured; Gene Products, gag--Analysis--AN; Histocompatibility Antigens Class I--Immunology--IM**; Lymphocyte **Transformation; Receptors, Leukocyte-Adhesion--Analysis--AN; Viral Core Proteins--Analysis--AN**
Chemical Name: Antibodies, Monoclonal; (Antigens, CD; (Antigens, CD8; (Antigens, Differentiation; (Antigens, Differentiation, T-Lymphocyte **; (Gene Products, gag; (Histocompatibility Antigens Class I; (HIV Core Protein p24;** (Lymphocyte **Function-Associated Antigen-1; (Lymphokines; (Viral Core Proteins**

5/3,K,AB/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1999 Dialog Corporation. All rts. reserv.

06654095 92407893
A high density cell culture system for generation of human lymphokine-activated killer (LAK) cells for clinical use in adoptive immunotherapy.
Shimizu K; Park K; Yamada M; Tarura K; Matsui Y; Hayakawa T
Department of Neurosurgery, Osaka University Medical School, Japan.

J Clin Lab Immunol (SCOTLAND) May 1990, 32 (1) p41-7, ISSN 0141-2760 Journal Code: J3K

Languages: ENGLISH

Document type: JOURNAL ARTICLE

A high density cell culture system has been developed for large-scale production of lymphokine-activated killer (LAK) cells from peripheral blood lymphocytes (PBLs) of malignant tumor patients. The system consists of a culture bag, which has two compartments separated by a semipermeable membrane, and an external rotator. The system allows for a long-term, at least 4 weeks, culture of LAK cells at high cell density in the inner compartment. The collected PBLs were first divided between the two culture bags and cultured without harvesting for 7-10 days to obtain LAK cells. Half of the LAK cells from each bag was administered to patients twice a week for clinical trials. Culture of the remaining half was continued following addition of a fresh culture medium. LAK cells were transferred to patients alternatively from each bag for the following 2-3 weeks. The total number of LAK cells administered amounted to 3.9-9.8 (mean 5.8) times more than the PBLs collected by leukapheresis (n = 10). The 5 x 10(6)/ml of PBLS of the initial concentration reached a maximum of 2 x 10(7)/ml. Our system does not need for a CO2 incubator. Cytotoxicity of the LAK cells was evaluated in 4 hr 51Cr release assays. Mean cytotoxicity at maximum cell density was 95.4 +/- 3.2% against ONS-12 (a human glioma cell) and 84.8 +/- 3.0% against Daudi cells (n = 10), but gradually decreased to about 50% at the end of fourth week of the culture period. Cell viability of the LAK cells was normally over 80% through the entire culture period. (ABSTRACT TRUNCATED AT 250 WORDS)

May 1990,

... patients. The system consists of a culture bag, which has two compartments separated by a semipermeable membrane, and an external rotator. The system allows for a long-term, at least 4 weeks...

...; PD; Killer Cells, Lymphokine-Activated--Drug Effects--DE; Killer Cells, Lymphokine-Activated--Transplantation--TR; Leukapheresis; Lymphoc yte Subsets; Neoplasms--Blood--BL; Neoplasms--Therapy--TH; Recombinant Proteins--Pharmacology--PD

5/3,K,AB/19 (Item 19 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

06617284 90217498

Soluble factor-independent stimulation of human B cell response by mouse thymoma cells. Cyclosporine A-resistant and -sensitive cell contact signals.

Zhang XH; Hauser C; Zubler RH

Department of Medicine, Hopital Cantonal Universitaire, Geneve, Switzerland.

J Immunol (UNITED STATES) Apr 15 1990, 144 (8) p2955-60, ISSN 0022-1767 Journal Code: IFB

Languages: ENGLISH

Document type: JOURNAL ARTICLE

In a Th cell-dependent antibody response, the Th act on B cells partly via a helper activity that is cell contact-dependent and cyclosporine A (CsA)-resistant. This activity seems to be required to induce responsiveness of the B cells toward T cell-derived soluble factors (cytokines) generally believed to be essential for B cell proliferation as well as for Ig secretion. In our study, we have investigated a system in which human B cells are stimulated by mutant EL-4 thymoma cells of mouse origin. It was found that human B cells proliferate and secrete Ig (either 1) in the presence of EL-4 cells plus human T cell supernatant (T-SUP), or 2) in the presence of EL-4 cells alone which have been induced with PMA or IL-1. The first situation conformed to the known synergy between CsA-resistant Th signal and cytokines. However, the B response due to PMA-induced EL-4 cells was special. The PMA-inducible helper activity was

CsA-sensitive at the same CsA concentration that inhibited IL-2 secretion of EL-4 cells, but the murine factors in EL-4 supernatant had no effect on human B cells; the helper effect did not occur across a semipermeable membrane . Any contribution of soluble factors from contaminating human T cells was ruled out by adding single human B cells by flow microfluorimetry to cultures with EL-4 cells and PMA. Such B cells generated clonal IgM, IgG, and/or IgA responses. CsA, thus, interfered with some cell contact-mediated signal. However, CsA did not reduce the amount of LFA-1 molecules on EL-4 cells. In conclusion, EL-4 cells can induce proliferation and differentiation of human B cells in a soluble factor-independent manner, via CsA-resistant and CsA-sensitive helper activities. This may represent an alternative pathway of B cell activation.

Apr 15 1990,
...had no effect on human B cells; the helper effect did not occur across a semipermeable membrane. Any contribution of soluble factors from contaminating human T cells was ruled out by adding...
; Antigens, Differentiation--Analysis--AN; Cell Adhesion; Cell Communication; Cyclosporins--Pharmacology--PD; Lymphocyte Cooperation ; Lymphocyte Transformation; Lymphokines--Physiology--PH; Mice; Receptors, Leukocyte-Adhesion--Analysis--AN; Tetradecanoylphorbol Acetate --Pharmacology--PD; Tumor...
Chemical Name: Antigens, Differentiation; (Cyclosporins; (Lymphocyte%% % Function-Associated Antigen-1; (Lymphokines; (Tetradecanoylphorbol Acetate

5/3,K,AB/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
 10/1/99

06573590 91209828
Prevention of CTL and NK cell-mediated cytotoxicity by microencapsulation [see comments]
Soon-Shiong P; Lu ZN; Grewal I; Lanza R; Clark W
Molecular Biology Institute, University of California, Los Angeles.
Horm Metab Res Suppl (GERMANY) 1990, 25 p215-9, ISSN 0018-5043
Journal Code: GBJ
Comment in Horm Metab Res 1992 Feb;24(2):96
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Graft rejection represents one of the major barriers preventing successful pancreatic islet transplantation. Microencapsulation of isolated islets has been proposed as a potential method of overcoming this problem. We present here for the first time evidence that the biocompatible semi-permeable capsule membrane prevents cytotoxic T-lymphocyte (CTL) and natural killer (NK) cell-mediated cytotoxicity. The ability of the microcapsule to immunoisolate pancreatic and tumor cell (EL-4 and YAC-1) targets from these two mechanisms of the immune rejection response was assessed using a 51chromium-release assay. Significant cell lysis occurred when target cells were incubated with free effector cells, or with NK effector cells co-encapsulated with NK-sensitive target cells (via the release of NK cytotoxic factors (NKCF)). This effect was not observed with encapsulated effector cells alone. These results clearly demonstrate the efficacy of the microcapsule in protecting target cells against both specific cytotoxicity by CTL's, and nonspecific killing by NK cells. They also provide a method for the in vitro evaluation of the immunoprotective properties of the various new capsular materials, in terms of the effector limb or destructive phase of the allograft rejection response.

1990,
... for the first time evidence that the biocompatible semi-permeable capsule membrane prevents cytotoxic T-lymphocyte (CTL) and natural killer (NK) cell-mediated cytotoxicity. The ability of the microcapsule to immunoisolate pancreatic and tumor cell (EL-4 and

YAC-1) targets from these two...

... not observed with encapsulated effector cells alone. These results clearly demonstrate the efficacy of the **microcapsule** in protecting target cells against both specific cytotoxicity by CTL's, and nonspecific killing by...

5/3,K,AB/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06362924 90154872
The use of microcapsules for high density growth of human tumor infiltrating lymphocytes and other immune reactive T cells.
Reilly EB; Antognetti G; Wesolowski JS Jr; Sakorafas P
Department of Immunology, Damon Biotech. Inc., Needham Heights, MA 02194.
J Immunol Methods (NETHERLANDS) Feb 9 **1990**, 126 (2) p273-9,
ISSN 0022-1759 Journal Code: IFE
Languages: ENGLISH
Document type: JOURNAL ARTICLE
The use of microcapsules to achieve high density growth of tumor infiltrating lymphocytes (TIL) and other antigen-specific human T cells is described. Whereas human T cells in suspension cultures usually do not exceed 1-2 x 10(6) cells/ml, densities approaching that found in living tissues (greater than 10(8) cells/ml) have been observed for **microcapsule** cultures. TIL and human peripheral blood-derived T cells can be routinely recovered from microcapsules with viabilities greater than or equal to 90%. The recovered cells retain their antigen reactivities and bear cell surface phenotypes identical to their counterparts grown in suspension culture. These findings suggest that **microcapsule** technology could prove valuable in generating the vast numbers of cells required for TIL therapy and other forms of adoptive immunotherapy with T cells.

Feb 9 **1990**,
... that found in living tissues (greater than 10(8) cells/ml) have been observed for **microcapsule** cultures. TIL and human peripheral blood-derived T cells can be routinely recovered from microcapsules...

... cell surface phenotypes identical to their counterparts grown in suspension culture. These findings suggest that **microcapsule** technology could prove valuable in generating the vast numbers of cells required for TIL therapy...
; Antibodies, Monoclonal; Antigens, Differentiation, T-**Lymphocyte** --Immunology--IM; Cell Count; Cell Division; Cell Line; Cytotoxicity Tests, Immunologic; Melanoma--Immunology--IM; Methods...
Chemical Name: Antibodies, Monoclonal; (Antigens, Differentiation, T-**Lymphocyte**

5/3,K,AB/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05979332 87274351
Requirement for mitogen, T cell-accessory cell contact, and interleukin 1 in the induction of resting T-cell proliferation.
Chatila TA; Schwartz DH; Miller R; Geha RS
Clin Immunol Immunopathol (UNITED STATES) Aug **1987**, 44 (2) p235-47, ISSN 0090-1229 Journal Code: DEA
Contract/Grant No.: AI-22058, AI, NIAID; HD-07321, HD, NICHD; AI-20373, AI, NIAID
Languages: ENGLISH
Document type: JOURNAL ARTICLE

The role of interleukin 1 (IL-1) and accessory cells (AC) in mitogen-driven, resting human peripheral blood T **lymphocyte** proliferation was examined utilizing highly purified T-cell preparations. Such preparations fail to respond to optimal concentrations of the lectin phytohemagglutin (PHA) or interleukin 2 (IL-2), indicating the functional depletion of monocytes (Mo.) and of activated T cells, respectively. The requirement for Mo. and IL-1 was quantitatively determined by adding known loads of Mo. and of recombinant human IL-1 alpha or beta forms (r-hIL-1, alpha/beta) to T-cell preparations and monitoring the resultant proliferative responses to the mitogens PHA, concanavalin A (Con A), the anti-CD3 monoclonal antibody (mAb) Leu 4, and Sepharose beads-linked Leu 4. Although some mitogens induced IL-2r gene transcription and surface expression in T cells, all mitogens tested failed to drive T cells to proliferate in the absence of Mo. r-h IL-1, as well as Mo.-conditioned media, failed to support the proliferation of mitogen-treated T cells. However, r-h IL-1 significantly amplified the proliferative responses of mitogen-treated T cells when suboptimal loads of Mo. were added. Both r-h IL-1 alpha and beta forms behaved identically in all the aforementioned experiments. The necessity of T cell-Mo. contact for T-cell proliferation was established by demonstrating that T cells separated from Mo. by a **semipermeable membrane** which allowed free diffusion macromolecules failed to proliferate to the mitogens tested. In contrast to lectins and anti-CD3 mAb phorbol-12-myristate-13-acetate (PMA) induced on its own a modest proliferative response which was greatly enhanced by r-h IL-1 independent of the addition of monocytes. The mechanism of r-h IL-1 action in supporting PMA-primed, T-cell proliferation involved the induction of IL-2 synthesis. We conclude that IL-1 does not substitute for the need for Mo. in supporting mitogen-driven T-cell proliferation. Mitogens, direct accessory-T-cell contact, and IL-1 each act, in this order, to bring about resting T-cell proliferation. The distinct behavior of PMA might relate to its ability to substitute for monocyte contact in promoting the progress of T cells through the cell cycle.

Aug **1987**,

... 1 (IL-1) and accessory cells (AC) in mitogen-driven, resting human peripheral blood T **lymphocyte** proliferation was examined utilizing highly purified T-cell preparations. Such preparations fail to respond to ...

... T-cell proliferation was established by demonstrating that T cells separated from Mo. by a **semipermeable membrane** which allowed free diffusion macromolecules failed to proliferate to the mitogens tested. In contrast to...

Descriptors: Antigen-Presenting Cells--Immunology--IM; *Interleukin-1 --Physiology--PH; ***Lymphocyte** Transformation; *T-Lymphocytes --Immunology--IM; Cell Communication; Interleukin-2--Biosynthesis--BI; **Lymphocyte** Transformation--Drug Effects--DE; Mitogens--Pharmacology --PD; Proteins--Pharmacology--PD; Receptors, Immunologic--Metabolism--ME; Recombinant...

5/3,K,AB/23 (Item 23 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05787533 89176844

Interleukin 1 production during accessory cell-dependent mitogenesis of T lymphocytes.

Bhardwaj N; Lau LL; Friedman SM; Crow MK; Steinman RM
Rockefeller University, New York, New York 10021.

J Exp Med (UNITED STATES) Mar 1 **1989**, 169 (3) p1121-36, ISSN 0022-1007 Journal Code: I2V
Contract/Grant No.: AI-24540, AI, NIAID
Languages: ENGLISH
Document type: JOURNAL ARTICLE

We have studied the control and significance of IL-1 production in human

leukocyte cultures during accessory cell-dependent, T **lymphocyte** mitogenesis using sensitive bioassays and immunolabeling techniques. In primary antigen-dependent systems like the MLR, IL-1 production was not detected in accessory cells (monocytes, dendritic cells) or T cells, suggesting that it is not an early product in these responses. However, monocytes could be induced to make IL-1 after interacting with sensitized antigen-specific T cells. Both alloreactive T cell clones or freshly prepared lymphoblasts induced IL-1 provided the monocytes carried the HLA-DR antigens to which the T cells were initially sensitized. Even in these circumstances, dendritic cells and B cells failed to make IL-1. The mechanism whereby activated T cells induce IL-1 in monocytes was explored. Supernatants from cocultures of monocytes and T cells or several recombinant cytokines induced little or no IL-1. A more potent antigen independent pathway of IL-1 induction was identified. IL-1 could be induced in third-party HLA-DR nonspecific monocytes in cocultures of alloreactive T cell clones or blasts and HLA-DR-specific dendritic cells. The induction was factor independent since dendritic cells and T blasts placed in a chamber separate from third-party monocytes by a **semipermeable membrane** did not induce monocyte IL-1. These results suggest that a cell contact mechanism rather than an IL-1-inducing factor leads to IL-1 production. The role of IL-1 in T cell proliferation was tested with a polyclonal anti-IL-1 antibody. The antibody failed to block the proliferation of primary T cells, or alloreactive T cell clones and blasts stimulated with HLA-specific monocytes or dendritic cells, even though IL-1 in the medium was neutralized.

Mar 1 **1989**,

...and significance of IL-1 production in human leukocyte cultures during accessory cell-dependent, T **lymphocyte** mitogenesis using sensitive bioassays and immunolabeling techniques. In primary antigen-dependent systems like the MLR...

... cells and T blasts placed in a chamber separate from third-party monocytes by a **semipermeable membrane** did not induce monocyte IL-1. These results suggest that a cell contact mechanism rather...

Descriptors: Interleukin-1--Biosynthesis--BI; *Leukocytes--Metabolism--ME; ***Lymphocyte** Transformation; *T-Lymphocytes--Immunology--IM...; Metabolism--ME; HLA-DR Antigens--Immunology--IM; Immunoassay; Kinetics; Leukocytes--Immunology--IM; Lipopolysaccharides--Pharmacology--PD; **Lymphocyte** Culture Test, Mixed; Monocytes--Immunology--IM; Monocytes --Metabolism--ME

5/3,K,AB/24 (Item 24 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05716352 89272092

[A new high-yield continuous cell culture system and its clinical application in adoptive immunotherapy with LAK cells]

Noto T; Tokuda Y; Tajima T; Mitomi T; Nakamura Y; Watanabe K; Yamamura M; Ichinohe K

Dept. of Surgery, Tokai University School of Medicine.

Gan To Kagaku Ryoho (JAPAN) Apr **1989**, 16 (4 Pt 2-3) p1893-8,
ISSN 0385-0684 Journal Code: 6T8

Languages: JAPANESE Summary Languages: ENGLISH

Document type: JOURNAL ARTICLE English Abstract

We developed a high-yield culture system, consisting of a culture bag on a rotator. The culture bag has two compartments, an inner compartment separated from an outer compartment by a **semipermeable membrane**. Cells in an appropriate culture medium are placed in the inner compartment, and medium without serum is placed in the outer compartment. The bag is rotated at an angle of 45 degrees between 0.5 and 5 rpm in a 37 degrees C incubator. The medium is changed in the outer compartment at intervals when needed. The outer compartment acts as the feeder as well as allows catabolites to diffuse through the culture. In addition, since the

system is a closed-system, sterile conditions can easily be maintained. Using this system, we demonstrated that up to 20 X 10(6) cells/ml of PBMC could be cultured in IL-2 with sufficient recovery rate and cytotoxicity.

Apr **1989**,
... culture bag has two compartments, an inner compartment separated from an outer compartment by a **semipermeable membrane**. Cells in an appropriate culture medium are placed in the inner compartment, and medium without...
; Interleukin-2; **Lymphocyte** Transformation; Macrophage Activation

5/3,K,AB/25 (Item 25 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04817628 86076518
The mitogenicity for murine splenocytes of specific surface components of the oral periodontopathic bacterium, Actinomyces viscosus.
Halfpap LM; Brown DA; Clagett JA; Birdsell DC
Arch Oral Biol (ENGLAND) **1985**, 30 (9) p661-6, ISSN 0003-9969
Journal Code: 83M
Contract/Grant No.: DE05991, DE, NIDR; DE02600, DE, NIDR; DE00030, DE, NIDR
Languages: ENGLISH
Document type: JOURNAL ARTICLE
Many characterized fractions obtained from A. viscosus were examined to identify the macromolecules responsible for mitogenicity for lymphocytes. Spleen-cell suspensions of CBA/J mice were cultured with 50-200 micrograms dry weight of A. viscosus strains T14V and T14AV cellular components. Lipopolysaccharide (LPS) (Escherichia coli) was used as a positive control. Mechanical disruption with a French pressure cell or sonication produced preparations with a stimulation of 69,082 and 45,183 counts above background (CAB), respectively. Mitogenic activity was also present in the culture supernatant (38,000 CAB). Other poorly mitogenic fractions included the peptidoglycan, cell-wall fractions, muramidase digests of cell walls, and the **microcapsule** extracted from whole cells with 0.5 M MgNO3. The results suggest that mitogenic activity is not associated with the isolated cell-wall structure. The activity was released from the cell surface by physical shearing forces, as well as released into the medium growth.

1985,
... mitogenic fractions included the peptidoglycan, cell-wall fractions, muramidase digests of cell walls, and the **microcapsule** extracted from whole cells with 0.5 M MgNO3. The results suggest that mitogenic activity ...
Descriptors: Actinomyces--Immunology--IM; ***Lymphocyte** Transformation--Drug Effects--DE; *Mitogens--Pharmacology--PD; *Spleen--Immunology--IM

5/3,K,AB/26 (Item 26 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03485026 82067367
Role of the **immunoglobulin** coat in the process of microorganism phagocytosis]
O roli immunoglobulinovogo pokrova v protsesse fagotsitoza mikroorganizmov.
Bykov AS; Lazurenko IS; Seleznev AS
Arkh Patol (USSR) **1981**, 43 (9) p10-6, ISSN 0004-1955
Journal Code: 8OE
Languages: RUSSIAN Summary Languages: ENGLISH
Document type: JOURNAL ARTICLE English Abstract
Comparative electron microscopic examinations of staphylococcus aureus

under different conditions (in a pulmonary abscess of a patient, in a short-time contact with serum and blood cells of a donor, and experimental infection of white mice) revealed dissimilar possibilities of formation of an **immunoglobulin** coat on the surface of bacterial cell wall. Upon a short-time contact of S. aureus with human blood serum in vitro an **immunoglobulin** coating appeared on the bacterial cell wall. In control experiments with staphylococci killed with glutaraldehyde and treated with methycilline the possibility of formation of **microcapsule** by staphylococci was excluded. No **immunoglobulin** coating was detected in a protracted suppurative process. In the pulmonary abscess, different gram-positive and gram-negative bacteria were found.

Role of the **immunoglobulin** coat in the process of microorganism phagocytosis]

1981,

...a donor, and experimental infection of white mice) revealed dissimilar possibilities of formation of an **immunoglobulin** coat on the surface of bacterial cell wall. Upon a short-time contact of S. aureus with human blood serum in vitro an **immunoglobulin** coating appeared on the bacterial cell wall. In control experiments with staphylococci killed with glutaraldehyde and treated with methycilline the possibility of formation of **microcapsule** by staphylococci was excluded. No **immunoglobulin** coating was detected in a protracted suppurative process. In the pulmonary abscess, different gram-positive...

5/3,K,AB/27 (Item 27 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

03154594 80002347

Cellular cooperation in **lymphocyte** activation. II. Cooperative response of human peripheral T and B lymphocytes to rabbit anti-human beta 2-microglobulin.

Kin K; Kasahara T; Itoh Y; Sakurabayashi I; Kawai T; Morita K

Clin Exp Immunol (ENGLAND) May **1979**, 36 (2) p292-8, ISSN 0009-9104 Journal Code: DD7

Languages: ENGLISH

Document type: JOURNAL ARTICLE

In the present study we attempted to clarify the effects of anti-beta 2-microglobulin (a-beta 2m) on **lymphocyte** activation. Neither a-beta 2m IgG fraction nor F(ab')2 had a mitogenic effect on either highly purified T or B lymphocytes alone, while their mitogenic effect was observed when T and B lymphocytes were appropriately reconstituted. When T lymphocytes were reconstituted with mitomycin C (MMC) treated B lymphocytes, a negligible decrease in the response to a-beta 2m was observed compared to the response of an untreated mixture to a-beta 2m. On the other hand, when B lymphocytes were reconstituted with MMC-treated T lymphocytes, the response was markedly diminished. It was found, moreover, that the response of T lymphocytes separated by a **semipermeable membrane** from MMC-treated B lymphocytes was not enhanced, while a mixture of T and MMC-treated B lymphocytes in the same chamber showed a marked response. These results lead to the conclusion that the cells responding to a-beta 2m are mainly T lymphocytes whose response is strongly enhanced by B lymphocytes, and that for the mitogenic effect of a-beta 2m direct cell-to-cell interaction between T and B lymphocytes is necessary.

Cellular cooperation in **lymphocyte** activation. II. Cooperative response of human peripheral T and B lymphocytes to rabbit anti-human...

May **1979**,

... we attempted to clarify the effects of anti-beta 2-microglobulin (a-beta 2m) on **lymphocyte** activation. Neither a-beta 2m IgG fraction nor F(ab')2 had a mitogenic effect...

... markedly diminished. It was found, moreover, that the response of T

lymphocytes separated by a **semipermeable membrane** from MMC-treated B lymphocytes was not enhanced, while a mixture of T and MMC...
...Descriptors: 2-Microglobulin--Immunology--IM; *Antibodies--Immunology --IM; *B-Lymphocytes--Immunology--IM; *Beta-Globulins--Immunology--IM; * **Lymphocyte** Cooperation; ***Lymphocyte** Transformation; *T-Lymphocytes--Immunology--IM

5/3,K,AB/28 (Item 1 from file: 55)
DIALOG(R)File 55:Biosis Preiviews(R)

11538298 BIOSIS NO.: 199800319630
Immunoblot analysis of proteins associated with HEMA-MMA microcapsules: Human serum proteins in vitro and rat proteins following implantation.

AUTHOR: Babensee J E; Cornelius R M; Brash J L; Sefton M V(a)
AUTHOR ADDRESS: (a)Dep. Chem. Eng. Appl. Chem., Centre Biomaterials, Univ. Toronto, Toronto, ON M5S 3E5, Canada

JOURNAL: Biomaterials 19 (7-9):p839-849 April-May, 1998
ISSN: 0142-9612
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Human serum proteins and their fragments, associated with hydroxyethyl methacrylate-methyl methacrylate (HEMA-MMA) copolymer microcapsules, were characterized using sodium dodecyl sulphate-polyacrylamide gel electrophoresis (SDS-PAGE) and immunoblot analysis. Capsules were incubated with serum for 1 week in vitro and then dissolved in ethanol to also precipitate the adsorbed protein. The precipitate was dissolved in 2% (w/v) SDS (the 'capsule eluate') to be assayed by electrophoresis. The majority of proteins probed for in the immunoblots were detected in the capsule eluates. These included fibronectin, plasminogen, IgG, vitronectin, Factor B, Factor H, Factor I, C3, but not beta-lipoprotein, fibrinogen, HMWK, or IgM. Complement activation fragments were detected in both the immunoblots of the capsule eluates and the medium containing serum without capsules. Thus, the adsorption of these fragments, formed independent of capsule presence, may be partially or completely responsible for the complement fragments associated with capsules. The prevention of complement activation by the addition of 5.8 mM EDTA, at the beginning of the week-long incubation, resulted in fewer low-molecular-weight C3 fragments associated with capsules. Rat proteins were also detected in immunoblots of the eluate of 'free-floating' capsules from the rat peritoneal cavity following implantation for 1 day using anti-human antibodies. Detected proteins included HMWK, fibrinogen, antithrombin III, transferrin, alpha1-antitrypsin, fibronectin, albumin, alpha2-macroglobulin, vitronectin, beta2-microglobulin, Factor B and Factor I. Rat fibrinogen, IgG, and complement C3 fragments were also detected in these immunoblots, but with monoclonal antibodies against the rat proteins.

DESCRIPTORS:
CHEMICALS & BIOCHEMICALS: ...**microcapsule** protein...
...**microcapsule** protein...

...**microcapsule** protein...

...**microcapsule** protein...

...**microcapsule** protein...

...**microcapsule** protein...

...**microcapsule** protein...

...**microcapsule** protein...

...IgG (**immunoglobulin** G...

...**microcapsule** protein
1998

5/3,K,AB/29 (Item 2 from file: 55)
DIALOG(R)File 55:Biosis Preiviews(R)

11407060 BIOSIS NO.: 199800188392
Role of macrophages in elevated IgA and IL-6 production by Peyer's patch cultures following acute oral vomitoxin exposure.

AUTHOR: Yan Ding(a); Zhou Hui-Ren(a); Brooks Kathryn H; Pestka James J(a)
AUTHOR ADDRESS: (a)Dep. Food Sci. Hum. Nutr., Mich. State Univ., East Lansing, MI 48824, USA

JOURNAL: Toxicology and Applied Pharmacology 148 (2):p261-273 Feb., 1998
ISSN: 0041-008X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Oral vomitoxin (VT) exposure in mice results in elevated cytokine gene expression, increased production of IgA, and IgA nephropathy. To determine the potential role of macrophages (Mvariant phi) in these effects, an ex vivo model was devised whereby Peyer's patch (PP) and spleen cells were prepared from mice 2 h after oral exposure to 0 or 25 mg/kg body wt VT, cultured, and then evaluated for IgA and cytokine IL-6 production. Both PP and, to a lesser extent, spleen cells from treatment mice produced more IgA over a 7-day period than did corresponding control cells when cultured without a costimulus or in the presence of either phorbol myristate acetate plus ionomycin (PMA + ION) or lipopolysaccharide (LPS); IgA elevation was most marked in LPS-treated cultures. The VT effect was completely ablated in PP cultures that were depleted of Mvariant phi) but not in Mvariant phi-depleted spleen cultures. VT exposure similarly increased production of IL-6, an important helper factor for IgA secretion, in LPS-stimulated PP and spleen cell cultures. IL-6 production was also ablated by Mvariant phi depletion. A potential costimulatory role for Mvariant phi was further suggested because both IgA and IL-6 production increased when Mvariant phi-depleted PP cells from VT-treated animals were cocultured with peritoneal Mvariant phi from VT-treated animals. Similar effects were observed when an analogous ex vivo approach was used with purified PP B cells and peritoneal Mvariant phi. PP B cells from control animals also secreted elevated levels of IgA when cocultured with splenic CD4+ cells from VT-treated animals, thus confirming previous studies showing that T cell help also contributes to increased IgA production. Potential roles for soluble mediators and cell contact in this process were suggested when IgA production was measured in cultures of PP cells separated from VT-treated Mvariant phi by a **semipermeable membrane**. Taken together, these and previous results suggest that Mvariant phi may play a key mechanistic role in elevated IgA production and IgA nephropathy in VT-exposed mice.

...ABSTRACT: was measured in cultures of PP cells separated from VT-treated Mvariant phi by a **semipermeable membrane**. Taken together, these and previous results suggest that Mvariant phi may play a key mechanistic...
DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ...IgA {**immunoglobulin** A...
1998

5/3,K,AB/30 (Item 3 from file: 55)
DIALOG(R)File 55:Biosis Preiviews(R)

10851333 BIOSIS NO.: 199799472478
Orally administered microencapsulated reovirus can bypass suckled, neutralizing maternal antibody that inhibits active immunization of neonates.

AUTHOR: Periwal S Bhargava; Speaker Tully J; Cebra John J(a)
AUTHOR ADDRESS: (a)209 Kaplan Wing, Leidy Lab., Univ. Pa., Philadelphia, PA 19104-6018, USA

JOURNAL: Journal of Virology 71 (4):p2844-2850 1997
ISSN: 0022-538X
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Purified reovirus serotype 1, encapsulated in biodegradable aqueous microcapsules, was found to bypass maternal antibody passively transferred by suckling to neonates. Genetically identical, immunocompetent F1 scid/+ mice were generated by the reciprocal crosses of C.B17 scid/scid and normal congenic +/+ adult mice. The immunocompetent +/+ dams were either orally infected with reovirus prior to mating or not. Thus, these immunocompetent F-1 pups developed either in the absence or in presence of passively transferred maternal immunity. The F-1 mice were orally immunized on day 10 with either live virus, microencapsulated reovirus, or empty microcapsules plus live virus. The immune responses were assessed in the neonatal gut-associated lymphoid tissues (GALT). Examination of reovirus specific **immunoglobulin** A in the serum and GALT, taken on days 7, 14, and 21 postimmunization, clearly demonstrated that microencapsulated reovirus could bypass the normal effect of maternal antibodies, passively acquired by suckling, to inhibit active priming of neonates by oral route. These observations seem relevant to the development of efficacious oral vaccines that also allow passive, protective immunity via suckled maternal antibodies while permitting active oral immunization of neonates.

...ABSTRACT: responses were assessed in the neonatal gut-associated lymphoid tissues (GALT). Examination of reovirus specific **immunoglobulin** A in the serum and GALT, taken on days 7, 14, and 21 postimmunization, clearly...
MISCELLANEOUS TERMS: ...AQUEOUS **MICROCAPSULE**;
1997

5/3,K,AB/31 (Item 4 from file: 55)
DIALOG(R)File 55:Biosis Preiviews(R)

10726207 BIOSIS NO.: 199799347352
In vitro activation of human lymphocytes by crude and purified alginate microcapsules.

AUTHOR: Arita S(a); Thompson K; Jemtrud S; Cochrum K; Une S; Ohtsuka S; Mullen Y
AUTHOR ADDRESS: (a)Los Angeles, CA, USA

JOURNAL: Cell Transplantation 5 (5 SUPPL. 2):p54 1996

CONFERENCE/MEETING: Third International Congress of the Cell Transplant

Society Miami Beach, Florida, USA September 29-October 2, 1996
ISSN: 0963-6897
RECORD TYPE: Citation
LANGUAGE: English

MISCELLANEOUS TERMS: ...IN-VITRO **LYMPHOCYTE** ACTIVATION...

...**MICROCAPSULE** ALGINATE
1996

5/3,K,AB/32 (Item 5 from file: 55)
DIALOG(R)File 55:Biosis Preiviews(R)

09452767 BIOSIS NO.: 199497461137
Feasibility of agarose microbeads with xenogeneic islets as a bioartificial pancreas.

AUTHOR: Iwata Hiroo(a); Kobayashi Kazuo; Takagi Tatsuya; Oka Takayuki; Yang Hua; Amemiya Hiroshi; Tsuji Takayuki; Ito Fumiaki
AUTHOR ADDRESS: (a)Dep. Surgical Res., Natl. Cardiovascular Center Res. Inst., Fujishiro-dai, Suita, Osaka 565, Japan

10/4/99

JOURNAL: Journal of Biomedical Materials Research 28 (9):p1003-1011 1994
ISSN: 0021-9304
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A bioartificial pancreas, that is, transplantation of islets of Langerhans (islets) which are enclosed in a **semipermeable membrane**, has been proposed as a treatment for type I diabetes. The islets are immuno-isolated from the host by the **semipermeable membrane** preventing rejection while maintaining control of glucose metabolism for an extended period. The purpose of the current research is to evaluate the feasibility of preparing agarose microbeads with xenogeneic hamster islets as a bioartificial pancreas in streptozotocin induced diabetic mice. In the recipients with a low level of anti-hamster antibodies, the combination of encapsulation of hamster islets in 5% agarose microbeads and in vitro culture of them prolonged xenograft survivals. Four of 6 recipients were still normoglycemic at 100 days after implantation. However, the same procedure was not effective in the recipients which were sensitized in advance by transplantation of free hamster islets and thus had high levels of anti-hamster antibodies. The average normoglycemic period was 32 days. Antibodies permeated through the microbeads and activated complement on the cell surfaces. The network of agarose microbeads was rendered dense by increasing the concentration of agarose to restrict the diffusion of antibodies. Graft survivals were prolonged with increasing concentrations of agarose. As an analysis using diffusion equations predicted, the survivals were inversely proportional to the diffusion coefficient of IgG in each agarose gel. Islet xenotransplantation was enabled by the combination of the microbeads with a concentration of agarose higher than 7.5% and in vitro culture even in recipients having a high level of preformed antibodies.

...ABSTRACT: bioartificial pancreas, that is, transplantation of islets of Langerhans (islets) which are enclosed in a **semipermeable membrane**, has been proposed as a treatment for type I diabetes. The islets are immuno-isolated from the host by the **semipermeable membrane** preventing rejection while maintaining control of glucose metabolism for an extended period. The purpose of...
MISCELLANEOUS TERMS: ...**IMMUNOGLOBULIN** G...

...**SEMIPERMEABLE MEMBRANE**

1994
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